



# UTILITY PATENT APPLICATION TRANSMITTAL

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<p align="center"><b>APPLICATION ELEMENTS</b> <i>See MPEP chapter 600 concerning utility patent application contents.</i></p>	<p><b>ADDRESS TO: Assistant Commissioner for Patents Box Patent Application Washington, DC 20231</b></p>		
<p>1. <input checked="" type="checkbox"/> Fee Transmittal Form</p> <p>2. <input checked="" type="checkbox"/> Specification, Claims &amp; Abstract ..... [ Total Pages: <u>29</u> ]</p> <p>3. <input checked="" type="checkbox"/> Drawing(s) (35 USC 113) ..... [ Total Sheets: <u>11</u> ]</p> <p>4. <input checked="" type="checkbox"/> Oath or Declaration ..... [ Total Pages: <u>3</u> ]</p> <p>    a. <input checked="" type="checkbox"/> Newly executed (original or copy)</p> <p>    b. <input type="checkbox"/> Copy from a prior application (37 CFR 1.63(d)) (for continuation/divisional with Box 17 completed)</p> <p>        i. <input type="checkbox"/> <u>DELETION OF INVENTOR(S)</u></p> <p>            Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).</p> <p>5. <input type="checkbox"/> Incorporation by Reference (usable if Box 4b is checked)</p> <p>    The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4b, is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.</p> <p>6. <input type="checkbox"/> Microfiche Computer Program (Appendix)</p> <p>7. <input type="checkbox"/> Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)</p> <p>    a. <input type="checkbox"/> Computer Readable Copy</p> <p>    b. <input type="checkbox"/> Paper Copy (identical to computer copy)</p> <p>    c. <input type="checkbox"/> Statement verifying identity of above copies</p>			
<p align="center"><b>ACCOMPANYING APPLICATION PARTS</b></p>			
<p>8. <input checked="" type="checkbox"/> Assignment Papers (cover sheet &amp; document(s))</p> <p>9. <input type="checkbox"/> 37 CFR 3.73(b) Statement (when there is an assignee)    <input type="checkbox"/> Power of Attorney</p> <p>10. <input type="checkbox"/> English Translation Document (if applicable)</p> <p>11. <input checked="" type="checkbox"/> Information Disclosure Statement (IDS)/PTO-1449    <input checked="" type="checkbox"/> Copies of IDS Citations</p> <p>12. <input type="checkbox"/> Preliminary Amendment</p> <p>13. <input checked="" type="checkbox"/> Return Receipt Postcard (MPEP 503) (Should be specifically itemized)</p> <p>14. <input type="checkbox"/> Small Entity Statement(s)    <input type="checkbox"/> Statement filed in prior application, status still proper and desired.</p> <p>15. <input checked="" type="checkbox"/> Certified Copy of Priority Document(s) (if foreign priority is claimed)</p> <p>16. <input type="checkbox"/> Other:</p>			
<p><b>17. If a CONTINUING APPLICATION, check appropriate box and supply the requisite information:</b></p> <p><input type="checkbox"/> Continuation <input type="checkbox"/> Divisional <input type="checkbox"/> Continuation-in-part (CIP) of prior application No: <u>      </u> / <u>      </u></p>			
<p><b>18. CORRESPONDENCE ADDRESS</b></p>			
<table border="0"> <tr> <td>STAAS &amp; HALSEY Attn: James D. Halsey, Jr. 700 Eleventh Street, N.W., Suite 500 Washington, DC 20001</td> <td>Telephone: (202) 434-1500 Facsimile: (202) 434-1501</td> </tr> </table>		STAAS & HALSEY Attn: James D. Halsey, Jr. 700 Eleventh Street, N.W., Suite 500 Washington, DC 20001	Telephone: (202) 434-1500 Facsimile: (202) 434-1501
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A DOCUMENT MANAGEMENT APPARATUS AND  
A COMPUTER-READABLE MEDIUM WITH A COMPUTER PROGRAM  
RECORDED THEREON FOR CAUSING A COMPUTER FUNCTION AS  
THE DOCUMENT MANAGEMENT APPARATUS

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FIELD OF THE INVENTION

The present invention relates to a document management apparatus used for managing, for example, distribution targets of objects for distribution such as drawings or documents in the manufacturing industry and to a computer-readable medium with a computer program recorded thereon for causing a computer function as the document management apparatus.

BACKGROUND OF THE INVENTION

15 In recent years, it has been growing in various fields to store and manage various types of information by a computer as electronic documents. For example, in the manufacturing industry, objects for distribution are managed as electronic documents and also information for distribution targets of each object for distribution is managed as electronic documents (expressed as a distribution-target management table hereinafter) each having contents as shown in Fig. 12.

As well known, there are various types of information managed by a computer, and a document represented by the distribution-target management table shown in Fig. 12 includes

attribute information such as a corporate organization name and  
a corporate organization code in which master information of  
the document may be managed by some other information processing  
unit. The corporate organization names are names of units  
5 constituting the organization to which an object for  
distribution belongs (in short, to which an object for  
distribution is to be distributed), and each corporate  
organization code is an information obtained by encoding a  
corporate organization name consisting of Chinese or other  
10 characters so as to easily handle the name by a computer.

Namely, the document like the distribution-target  
management table is required to be changed, when a corporate  
organization or so is changed, the contents in accordance with  
its change, while the information for the corporate  
15 organization or so may, in many cases, actually be managed by  
completely different information processing unit. However, in  
a device based on the conventional technology for managing  
documents such as the distribution-target management tables  
(e.g., technology disclosed in Japanese Patent Laid-Open  
20 Publication No. HEI 7-319921 or Japanese Patent Laid-Open  
Publication No. HEI 8-16757), a case where attribute  
information may be changed by some other information processing  
unit has not been considered.

Therefore, when a distribution target of an object for  
25 distribution is specified according to the distribution-target

management table of the object for distribution managed by the  
conventional type of device, there has often occurred cases  
where the distribution target is no more in-charge of the object  
for distribution or where the distribution target itself does  
5 not exist.

#### SUMMARY OF THE INVENTION

It is an object of the present invention to provide, for  
solving the problems described above, a document management  
10 apparatus in which master information of a plurality types of  
attribute information included in a document managed by a user  
is stored in other information processing unit, and in which  
the contents of the document managed by the user can be matched,  
when the master information is changed, to the master  
15 information after its change, as well as a computer-readable  
recording medium with a computer program recorded therein for  
causing a computer function as the document management  
apparatus.

With the present invention, when master information is  
20 changed, contents of a document managed by a user can  
automatically be matched with the changed master information.  
Therefore, documents can more accurately be managed by using  
this document management apparatus.

With the present invention, a document including  
25 corporate organization codes as well as corporate organization

names as attribute information for managing distribution  
targets of a document as an object for distribution is  
determined as an object for management, and information  
including one with corporate organization codes and corporate  
5 organization names correlated to each other is determined as  
master information. In this case, however, as a determination  
section, there is employed a unit for determining that a  
relation between attribute information included in a document  
conflicts with master information in a case where the corporate  
10 organization codes included in the document are stored in the  
master information but a combination of the corporate  
organization codes with the corporate organization names is not  
stored therein, and also in a case where the corporate  
organization names included in the document are stored in the  
15 master information but a combination of the corporate  
organization codes with the corporate organization names is not  
stored therein; and as a rewriting section, there is employed  
a unit for rewriting corporate organization names in a document  
when it is determined by the determination section that a  
20 relation between attribute information included in the document  
conflicts with the master information because the corporate  
organization codes included in the document are stored in the  
master information but a combination of the corporate  
organization codes with the corporate organization names is not  
25 stored therein, and for rewriting corporate organization codes

in a document when it is determined by the determination section that a relation between attribute information included in the document conflicts with the master information because the corporate organization names included in the document are stored in the master information but a combination of the corporate organization codes with the corporate organization names is not stored therein.

With the present invention, this document management apparatus is further used for handling a document as an object for distribution correlated to job information, and also can be used in a state of that a second information management device for maintaining second master information in which a corporate organization code or a corporate organization name can be retrieved from job information is connected to a communication network. The document management apparatus having the configuration described above is applicable to a generally used system with various information distributed to and managed by a Personnel server as well as by Enterprise-Department servers.

With the present invention, there is added an electronic mail outputting section for outputting an electronic mail when a document is to be rewritten to the Department identified by the attribute information included in the rewritten document, to notify that the attribute information in the document is to be changed. By adding this section, it is possible to obtain a document management apparatus enabling notification to the

corresponding Department that the attribute information in the document has been corrected. If the electronic mail outputting section is added as described above and also it is programmed to correct a document only when, for instance, acknowledgement  
5 to the transmitted electronic mail comes back, it is possible to obtain a document management apparatus enabling more accurate management of documents.

With the present invention, the document management apparatus according to the present invention can be realized  
10 not only as a dedicated device but also can be realized by installing a specified computer program into a computer through a program recorded medium.

Other objects and features of this invention will become apparent from the following description with reference to the  
15 accompanying drawings.

#### BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a block diagram showing general configuration of a document management apparatus according to an embodiment  
20 of the present invention;

Fig. 2 is an explanatory view showing a distribution-target management table maintained by the document management apparatus according to the embodiment;

Fig. 3 is a view showing a document management system  
25 constructed by using the document management apparatus

according to the embodiment;

Fig. 4 is an explanatory view showing information managed by an Enterprise-Department server connected to the document management apparatus according to the embodiment through a network;

Fig. 5 is an explanatory view showing information managed by a Personnel server connected to the document management apparatus according to the embodiment through a network;

Fig. 6 is a flow chart showing the processing of checking the distribution-target management table executed in the document management apparatus according to the embodiment;

Fig. 7 is a flow chart showing the processing of checking the distribution-target management table executed in the document management apparatus according to the embodiment;

Fig. 8 is a flow chart showing the processing of checking the distribution-target management table executed in the document management apparatus according to the embodiment;

Fig. 9 is an explanatory view showing a relation between a drawing number and a device/product's name maintained by the document management apparatus according to the embodiment;

Fig. 10 is a flow chart showing the processing of checking the distribution-target management table executed in the document management apparatus according to the embodiment;

Fig. 11 is a flow chart showing the processing of checking the distribution-target management table executed in the



document management apparatus according to the embodiment; and

Fig. 12 is an explanatory view showing a distribution-target management table based on the conventional technology.

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#### DESCRIPTION OF THE PREFERRED EMBODIMENTS

Detailed description is made hereinafter for preferred embodiments of the document management apparatus as well as of the computer-readable recording medium with a computer program recorded therein for causing a computer function as the document management apparatus according to the present invention with reference to an object for distribution such as drawings.

Fig. 1 shows configuration of a document management apparatus according to an embodiment of the present invention. As shown in the figure, the document management apparatus 10 is realized by installing a document management program prepared for the apparatus into a computer comprising a CPU 11, a ROM 12, a RAM 13, a hard disk drive (HDD) 14, an MO (Magneto-Optical) disk drive 15, a communication device 16, an interface circuits (IF) 17<sub>1</sub>, 17<sub>2</sub>, an input device 18, and a display unit 19. Namely, in this embodiment, a computer is operated as the document management apparatus 10 by making the CPU 11 provide controls over the sections according to the document management program read out from a MO disk 20 using the MO disk drive 15 and stored in the HDD 14.

The document management apparatus 10 according to the embodiment is an apparatus for managing objects for distribution as well as managing distribution-target management tables each comprising information for a distribution target of an object for distribution, and as schematically shown in the figure, drawings as a plurality of objects for distribution and a plurality of distribution-target management tables are stored in the HDD 14 thereof.

Fig. 2 shows configuration of the distribution-target management table. As shown in the figure, the distribution-target management table stores therein information such as Item Number, Corporate organization Code, Corporate organization Name, Region, Person-in-Charge, Copies to be Distributed, and Remarks. The corporate organization names are the names of units constituting an organization (names of Departments) in which the apparatus is used, and the corporate organization code is an information for coded corporate organization name. Furthermore, the distribution-target management table is prepared for each drawing as an object for distribution and stored in the HDD 14.

The document management apparatus 10 is used, as shown in Fig. 3, by connecting to one unit of Personnel server 30 and several units of Enterprise-Department servers 31 through a network. A system as shown in the figure with the document management apparatus 10, Personnel server 30, and more than one

units of Enterprise-Department server 31 connected to each other through a network is expressed as document management system hereinafter.

The document management apparatus 10 and the Personnel  
5 server 30 as well as the Enterprise-Department servers 31 according to the embodiment used for constituting the document management system are WWW (World Wide Web) servers.

As each of the Enterprise-Department servers 31, there is used a WWW server in which job-contents information on each  
10 of a plurality of Departments (corporate organization) managed by the Enterprise-Department server 31 is stored as schematically shown in Fig. 4. Furthermore, as the Personnel server 30, there is used a WWW server in which tables, for each of a plurality of Enterprise-Department codes, on URL (Uniform  
15 Resource Locator) of the Enterprise-Department server 31 identified by its Enterprise-Department code as well as on each of the Departments with job-contents information stored in the corresponding Enterprise-Department server 31 and with corporate organization names and corporate organization codes  
20 assigned to each of the Departments included therein are stored as schematically shown in Fig. 5.

Detail description is made hereinafter for the processing of checking a distribution-target management table which is the processing executed by the CPU 11 according to the document  
25 management program with reference to the flow charts shown in

Figs. 6 to 8, 10 and 11. This processing of checking a distribution-target management table is executed at a prespecified cycle (e.g., every month) although the description thereof is omitted in the flow charts.

5 As shown in Fig. 6, at the time of executing the processing of checking a distribution-target management table, the CPU 11 in the document management apparatus 10 first specifies a distribution-target management table on a first drawing (step S101). Then, the CPU 11 acquires a corporate organization code and a corporate organization name from the distribution-target management table, and stores the information in the RAM 13 as a second corporate organization code and a second corporate organization name respectively (step S102). Then, the CPU 11 retrieves a table in which the corporate organization code  
10 coincides with the second corporate organization code from the Personnel server 30 (Refer to Fig. 5) by controlling the communication unit 16 or the like (step S103).  
15

When the retrieval of the target table is successful (step S104; YES), the CPU 11 compares a corporate organization name  
20 in the retrieved table to the second corporate organization name (step S106), and when it is determined that both of the names are not coincident with each other (step S107; NO), the corporate organization name stored in the table retrieved from the Personnel server 30 is stored as the second corporate  
25 organization name (step S108).

On the other hand, when it is determined that there is no table in which the corporate organization code coincides with the second corporate organization code in the Personnel server 30 (step S104; NO), the CPU 11 retrieves a table in which the corporate organization name coincides with the second corporate organization name from the Personnel server 30 (step S109). Then, when this retrieval of the table is successful (step S110; YES), the corporate organization code in the table is stored as the second corporate organization code (step S111).

When neither the retrieval of a table in which the corporate organization code coincides with the second corporate organization code nor the retrieval of a table in which the corporate organization name coincides with the second corporate organization name are successful (step S110; NO), the CPU 11 records a comment in a Remarks column of the distribution-target management table as an object for processing that the corporate organization code and the corporate organization name are not stored in the Personnel server 30 (step S112).

After the above processing, the CPU 11 determines whether the processing for all drawings is completed or not (step S113), and specifies a distribution-target management table for the next drawing (step S114) when it is determined that the processing is not completed (step S113; NO). Then, the CPU 11 returns the processing to step S102 and starts processing for the newly specified distribution-target management table.

When tables including the corporate organization code and corporate organization name having the same contents as those of the corporate organization code and corporate organization name in the distribution-target management table as an object  
5 for processing exist in the Personnel server 30 (step S107; YES), and when retrieval is made for any table having only the corporate organization code coincident with that in the distribution-target management table as an object for processing and the corporate organization name in the table is  
10 stored as a second corporate organization name (step S108), or when retrieval is made for any table having only the corporate organization name coincident with that in the distribution-target management table as an object for processing and the corporate organization code in the table is stored as a second  
15 corporate organization code (step S111), the CPU 11 retrieves an Enterprise Department code corresponding to the second corporate organization code from the Personnel server 30 as shown in Fig. 7 (step S201).

Then, the CPU 11 retrieves any Department with the same  
20 corporate organization name as the second corporate organization name given thereto from the Enterprise-Department server 31 (Refer to Fig. 4) corresponding to the retrieved Enterprise Department code (step S202).

When the Department described above is failed to be  
25 retrieved (step S203; NO), the CPU 11 determines whether the

retrieval for all the Enterprise-Department servers 31 is completed or not (step S204). Then, if it is determined that some of the Enterprise-Department servers 31 have not yet been retrieved (step S204; YES), the CPU 11 retrieves any Department  
5 with the same corporate organization name as the second corporate organization name given thereto from the next Enterprise-Department server 31 (step S205), and returns the processing to the step S203.

When the retrieval of the Department with the same  
10 corporate organization name as the second corporate organization name given thereto is successful (step S203; YES), the CPU 11 specifies, as shown in Fig. 8, a name of a device or a product's name related to the drawing as an object for processing at that point of time (expressed as target job)  
15 according to the drawing stored in the document management apparatus 10 (step S301).

Specifically, in this step, the CPU 11 first acquires, as schematically shown in Fig. 9, a high-order drawing number included in a drawing as an object for processing, and further  
20 acquires a higher-order drawing number from the high-order drawing identified by the high-order drawing number. The CPU 11 repeats the processing described above until the target drawing number of the drawing for the device/product is acquired, and specifies the device/product's name (target job) for the  
25 drawing as an object for processing from the information

included in the drawing identified by the drawing number.

Returning to Fig. 8, description for the processing of checking the distribution-target management table will be continued. After the target job of the drawing as an object  
5 for processing is specified (step S301), the CPU 11 acquires, from the Enterprise-Department server 31 in which the Department has been retrieved, job-contents information of the corresponding Department (step S302). Then, the CPU 11 determines whether the retrieved Department is a  
10 Department-in-charge of the target job or not using the acquired job-contents information (step S303). Namely, it is determined whether the job including the device/product name exists among jobs in each projects or not.

When it is determined that the retrieved Department is  
15 not a Department-in-charge of the target job (step S303; NO), the CPU 11 determines whether the job has been transferred or not (step S304). If the job has been transferred, the corporate organization code and corporate organization name is included in the job-contents information. Therefore, when the job has  
20 been transferred (step S304; YES), the CPU 11 stores therein the corporate organization code and corporate organization name of the target as the second corporate organization code and second corporate organization name respectively (step S305), and executes the processing in step S103 and thereafter in Fig.  
25 6.



On the other hand, when the retrieved Department is the one in-charge of the target job (step S303; YES), the CPU 11 determines whether the contents of the distribution-target management table needs to be corrected or not (step S306). In this step, the CPU 11 determines that the content of the distribution-target management table needs to be corrected if the second corporate organization code is different from the corporate organization code in the distribution-target management table as an object for processing or if the second corporate organization name is different from the corporate organization name in the distribution-target management table.

When it is determined that the contents of the distribution-target management table needs to be corrected (step S306; YES), the CPU 11 sends an E-mail (electronic mail) to confirm the contents to be corrected to the Department correlated to the contents to be corrected (step S307). Then, when an E-mail on the acknowledgement is received from the corresponding Department within a prespecified period of time (step S308; YES), the CPU 11 corrects the contents of the distribution-target management table using the second corporate organization code and the second corporate organization name (step S309) and executes the processing in step S113 and thereafter (Fig. 6). Namely, the CPU 11 determines whether there is any drawing that has not been processed, and when it is determined that there is a drawing

left unprocessed then starts the processing for that drawing.

When it is determined that the contents of the distribution-target management table as an object for processing need not be corrected (step S306; NO), the CPU 11  
5 does not send the E-mail and executes the processing in step S113 and thereafter.

Then, when the acknowledgement is not received within the prespecified period of time (step S308; NO), the CPU 11 does not correct the distribution-target management table, and  
10 executes the processing in step S113 and thereafter. Namely, in this case, it is assumed that the information in the distribution-target management table conflicts with that in the Personnel server 30 or Enterprise-Department server 31. However, as the conflict between both of the information can  
15 not be confirmed, the processing of matching the information in the distribution-target management table with the information in the server is not executed until it is clearly confirmed.

When it is determined that the retrieved Department is  
20 not the one in-charge of the target job or that the job has not been transferred (step S304; NO), the CPU 11 sends an E-mail to confirm whether the Department is in-charge of the target job or not to the retrieved Department as shown in Fig. 10 (step S401). Then, when the acknowledgement is received within the  
25 prespecified period of time (step S402; YES), the CPU 11

corrects the contents of the distribution-target management table as an object for processing (step S403) and executes the processing in step S113 and thereafter (Fig. 6).

On the other hand, when the acknowledgement is not  
5 received within the prespecified period of time (step S402; NO),  
the CPU 11 retrieves any Department-in-charge of the target job  
by successively accessing other Enterprise-Department servers  
31 (step S404). Then, when the retrieval of the  
Department-in-charge of the target job is successful (step  
10 S405; YES), the CPU 11 executes the processing in step S307 and  
thereafter (Fig. 8). Namely, an E-mail to confirm the contents  
to be corrected is sent.

When the retrieval of the Department-in-charge of the  
target job is not successful (step S405; NO), the CPU 11  
15 terminates the processing for the distribution-target  
management table as an object for processing, and executes the  
processing in step S113 and thereafter (Fig. 6).

When the Department with the same corporate organization  
name as the second corporate organization name given thereto  
20 is not stored in any of the Enterprise-Department servers 31  
(Fig. 7: step S204; NO), as shown in Fig. 11, the CPU 11 sends  
an E-mail to inquire, to each of the Departments having the  
corporate organization name in the distribution-target  
management table, whether the Department is one in-charge of  
25 the target job or not (step S501).

Then, when the acknowledgement is received within the prespecified period of time (step S502; YES), the CPU 11 records a comment in the Remarks column of the distribution-target management table as an object for processing that the Department  
5 is still in-charge of the target drawing in the current corporate organization (step S503), and terminates the processing for the distribution-target management table ( executes the processing in step S113 and thereafter (Fig. 6)). On the other hand, when the acknowledgement is not received  
10 within the prespecified period of time (step S502; NO), the CPU 11 does not correct the contents of the distribution-target management table and executes the processing in step S113 and thereafter.

The CPU 11 performs the processing described above for  
15 all the drawings, and ends the processing for checking the distribution-target management tables when the processing for all the drawings is completed (step S113; YES).

As described above, the document management apparatus 10 according to the embodiment can rewrite attribute information  
20 for a drawing in a distribution-target management table so that the attribute information does not conflict with the master information of attribute information stored in a Personnel server 30 or in an Enterprise-Department server 31. Accordingly, by using the document management apparatus 10  
25 according to the present invention, the contents of the

distribution-target management table can automatically be corrected to those under the current situation even if a corporate organization code or a corporate organization name has been changed or if a Department-in-charge of the job has  
5 been changed.

The document management apparatus 10 can be modified in various ways. For example, although the document management apparatus 10 has been described as an apparatus that waits for an acknowledgement within a prespecified period of time after  
10 an E-mail is sent, however, the document management apparatus 10 may be modified to an apparatus in which the processing for a distribution-target management table for a next drawing is started after an E-mail is sent, and the processing for an acknowledgement is executed with the processing what is called  
15 interrupt processing.

Furthermore, the document management apparatus 10 can be modified in such away that the processing for sending an E-mail is not performed. Namely, the document management apparatus 10 can be so configured that, when it is found that  
20 there is a conflict between information in a distribution-target management table and information in a server, the information in the distribution-target management table is always rewritten so as not to conflict with the information in the server.

25 Furthermore, the document management apparatus 10 may be

so configured that the processing for checking distribution-target management tables is not periodically executed but is executed when the execution is instructed. Also it is natural to use the document management apparatus 10 as  
5 a device for managing not distribution-target management tables but some other electronic documents.

Although the present invention has been described with respect to specific embodiments for a complete and clear disclosure, the appended claims are not be thus limited but are  
10 to be construed as embodying all modifications and alternative constructions that may occur to one skilled in the art which fairly fall within the basic teaching herein set forth.

As described above, with the present invention, it is possible to obtain a document management apparatus which can  
15 match, when master information has been changed, the contents of a document managed by a user with the changed master information, namely which can more accurately manage the documents.

With the present invention, it is possible to obtain a  
20 document management apparatus in which a document including corporate organization codes as well as corporate organization names as attribute information for managing targets to be distributed of a document as an object for distribution can be determined as an object for management, and information  
25 including one with corporate organization codes correlated to

corporate organization names can be determined as master information.

With the present invention, it is possible to obtain a document management apparatus which is applicable to a  
5 generally used system with various information distributed to and managed by a Personnel server as well as by an Enterprise-Department servers.

With the present invention, correction of attribute information in a document can be notified to the corresponding  
10 Department, so that it is possible to obtain a document management apparatus enabling more accurate management of the documents.

With the present invention, it is possible to obtain a computer-readable recording medium with a computer program  
15 recorded therein for causing a computer work as the document management apparatus according to the present invention by installing a specified program into the computer using the program recorded medium.

This application is based on Japanese patent application  
20 No. HEI 10-209584 filed in the Japanese Patent Office on July 24, 1998, the entire contents of which are hereby incorporated by reference.

Although the invention has been described with respect to a specific embodiment for a complete and clear disclosure,  
25 the appended claims are not to be thus limited but are to be

construed as embodying all modifications and alternative constructions that may occur to one skilled in the art which fairly fall within the basic teaching herein set forth.



WHAT IS CLAIMED IS:

1. A document management apparatus for managing electronic documents by being connected to an information management device for maintaining master information for a plurality types  
5 of attribute information included in said documents through a communication network; said apparatus comprising:

a document storage section for storing therein a plurality of said documents;

a communication section for acquiring information from  
10 a device connected to said communication network;

a determination section for determining for each document stored in said document storage section by reading out the master information maintained by said information management device through said communication section whether  
15 a relation between the attribute information included in the document conflicts with the master information or not; and

a rewriting section for rewriting any of the attribute information included in the document when said determination section determines that the relation between the attribute  
20 information conflicts with the master information to attribute information in the master information so as not to conflict with the master information.

2. A document management apparatus according to claim 1;  
25 wherein said document is a document including corporate

organization codes as well as corporate organization names as attribute information for managing targets to be distributed of a document as an object for distribution;

5       said determination section determines that a relation between attribute information included in a document conflicts with the master information in a case where the corporate organization codes included in said document are stored in the master information but a combination of the corporate organization codes with the corporate organization names is not  
10   stored therein, and also in a case where the corporate organization names included in said document are stored in the master information but a combination of the corporate organization codes with the corporate organization names is not stored therein; and

15       said rewriting section rewrites corporate organization names in said document when it is determined by said determination section that the relation between the attribute information included in said document conflicts with the master information because the corporate organization codes included  
20   in said document are stored in the master information but a combination of the corporate organization codes with the corporate organization names is not stored therein, and rewrites corporate organization codes in said document when it is determined by the determination section that the relation  
25   between the attribute information included in said document

conflicts with the master information because the corporate organization names included in said document are stored in the master information but a combination of the corporate organization codes with the corporate organization names is not  
5 stored therein.

3. A document management apparatus according to claim 2; wherein said document as an object for distribution is correlated to job information;

10 a second information management device for maintaining second master information in which a corporate organization code or a corporate organization name can be retrieved from job information is connected to the communication network; said apparatus further comprising:

15 a retrieving section for retrieving, for each of said document stored in the document storage section, a corporate organization code or a corporate organization name correlated to job information related to a document as an object for distribution with the document related thereto from the second  
20 master information maintained by said second information management device through said communication section; and

a second rewriting section for rewriting, when a combination of the corporate organization code with the corporate organization name retrieved by said retrieving  
25 section does not coincide with the combination of the corporate

organization code with the corporate organization name included in said document, contents of said document so as to match between both of the contents.

5 4. A document management apparatus according to claim 1 further comprising an electronic mail outputting section for outputting, when a document is rewritten, an electronic mail to notify changing of attribute information in the document to each department identified by the attribute information  
10 included in the rewritten document.

5. A document management apparatus according to claim 2 further comprising an electronic mail outputting section for outputting, when a document is rewritten, an electronic mail  
15 to notify changing of attribute information in the document to each department identified by the attribute information included in the rewritten document.

6. A document management apparatus according to claim 3  
20 further comprising an electronic mail outputting section for outputting, when a document is rewritten, an electronic mail to notify changing of attribute information in the document to each department identified by the attribute information included in the rewritten document.

7. A computer-readable recording medium with a computer program recorded therein for causing a computer having a communication section function as a document management apparatus for managing electronic documents by being connected  
5 to an information management device for maintaining master information for a plurality types of attribute information included in said documents through a communication network; said apparatus comprising:

10 a document storage section for storing therein a plurality of said documents;

a determination section for determining for each document stored in said document storage section by reading out the master information maintained by said information management device through said communication section whether  
15 a relation between the attribute information included in the document conflicts with the master information or not; and

a rewriting section for rewriting any of the attribute information included in the document when said determination section determines that the relation between the attribute  
20 information conflicts with the master information to attribute information in the master information so as not to conflict with the master information.

## ABSTRACT OF THE DISCLOSURE

A document management apparatus having a constitution for periodically checking whether the attribute information in a document managed by a user conflicts with master information  
5 of the attribute information managed by a Personnel server or Enterprise-Department servers or not, and changing the attribute information in the document to the attribute information in the servers when both of the information conflict with each other.

FIG.1

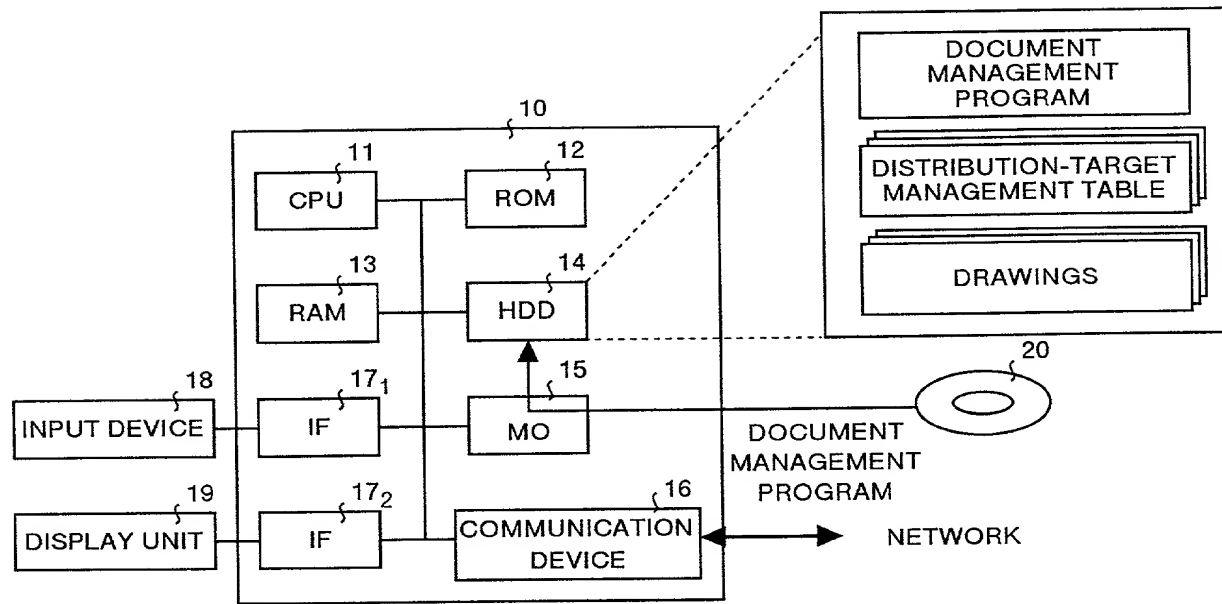


FIG.2

ITEM NUMBER	CORPORATE ORGANIZATION CODE	CORPORATE ORGANIZATION NAME	REGION	PERSON IN CHARGE	COPIES	REMARKS
0001	1432	INFORMATION SYSTEM DEPARTMENT	KAWASAKI	TADASHI OHASHI	1	
0002			MINAMITAMA		2	
0003			NUMAZU		2	

FIG.3

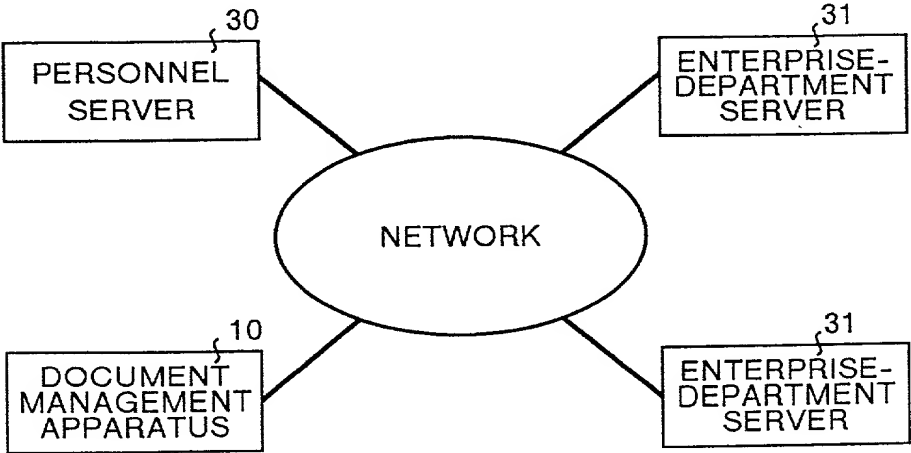




FIG.4

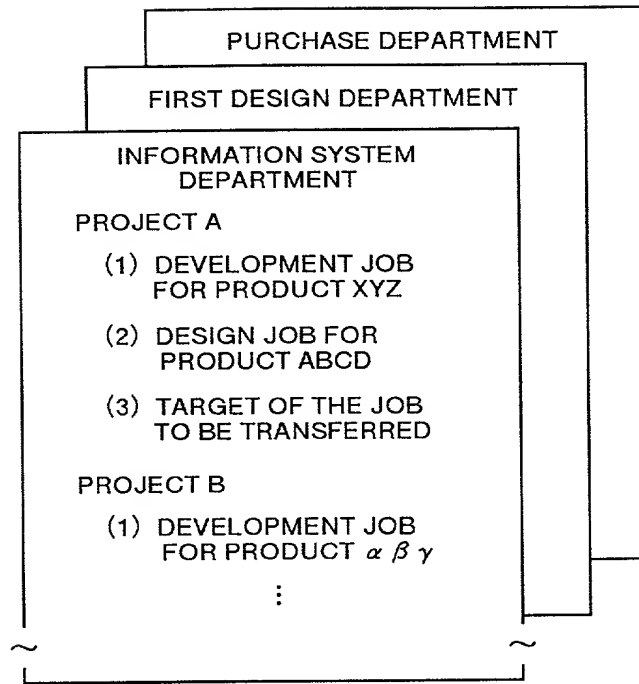


FIG.5

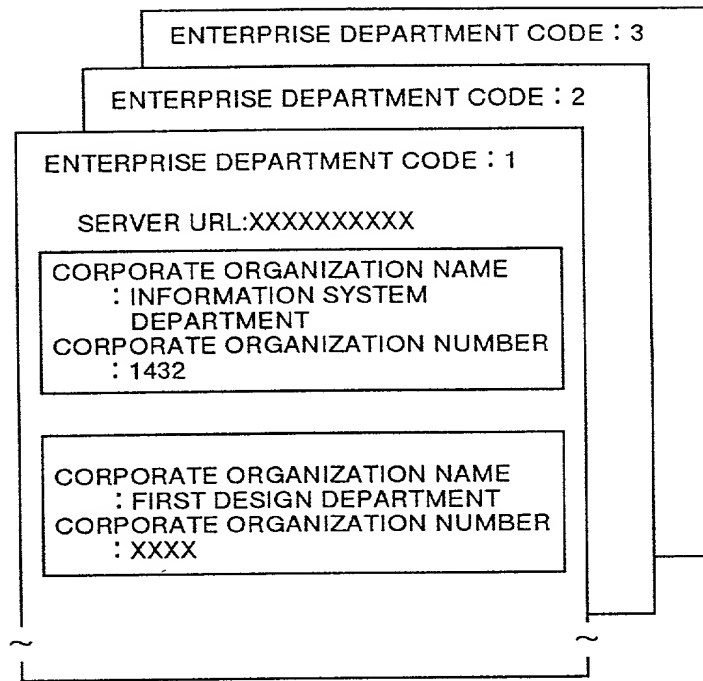


FIG.6

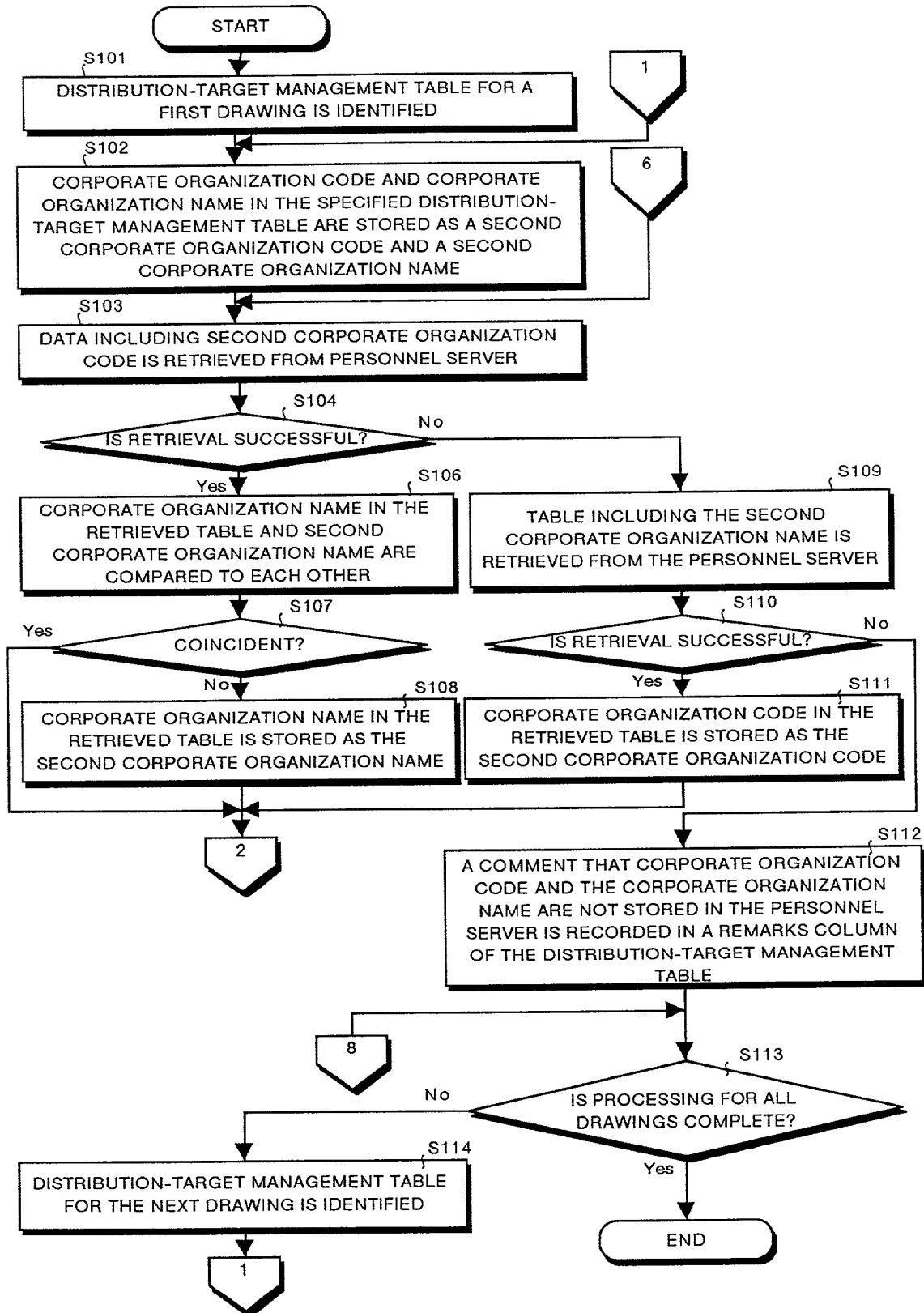


FIG.7

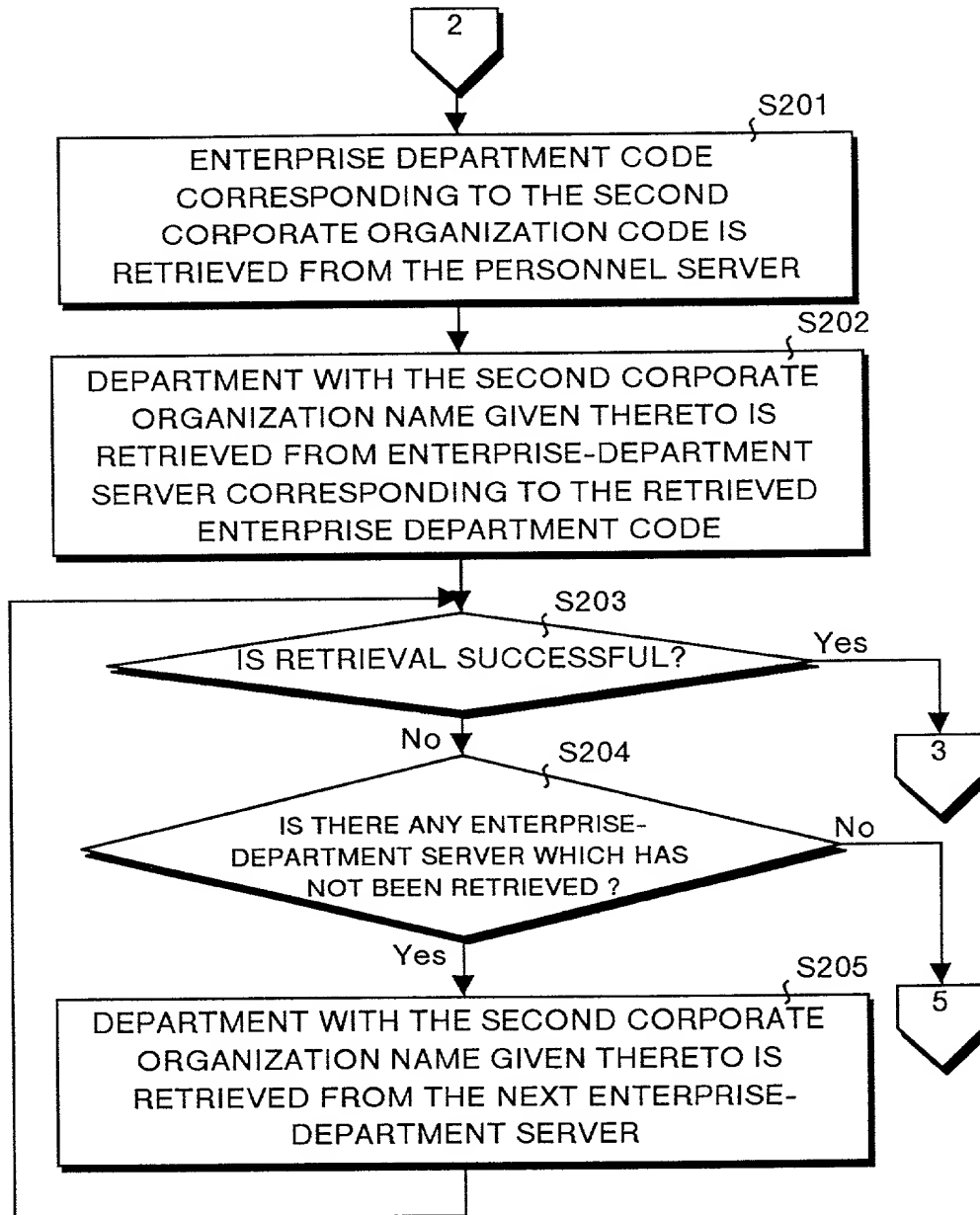


FIG.8

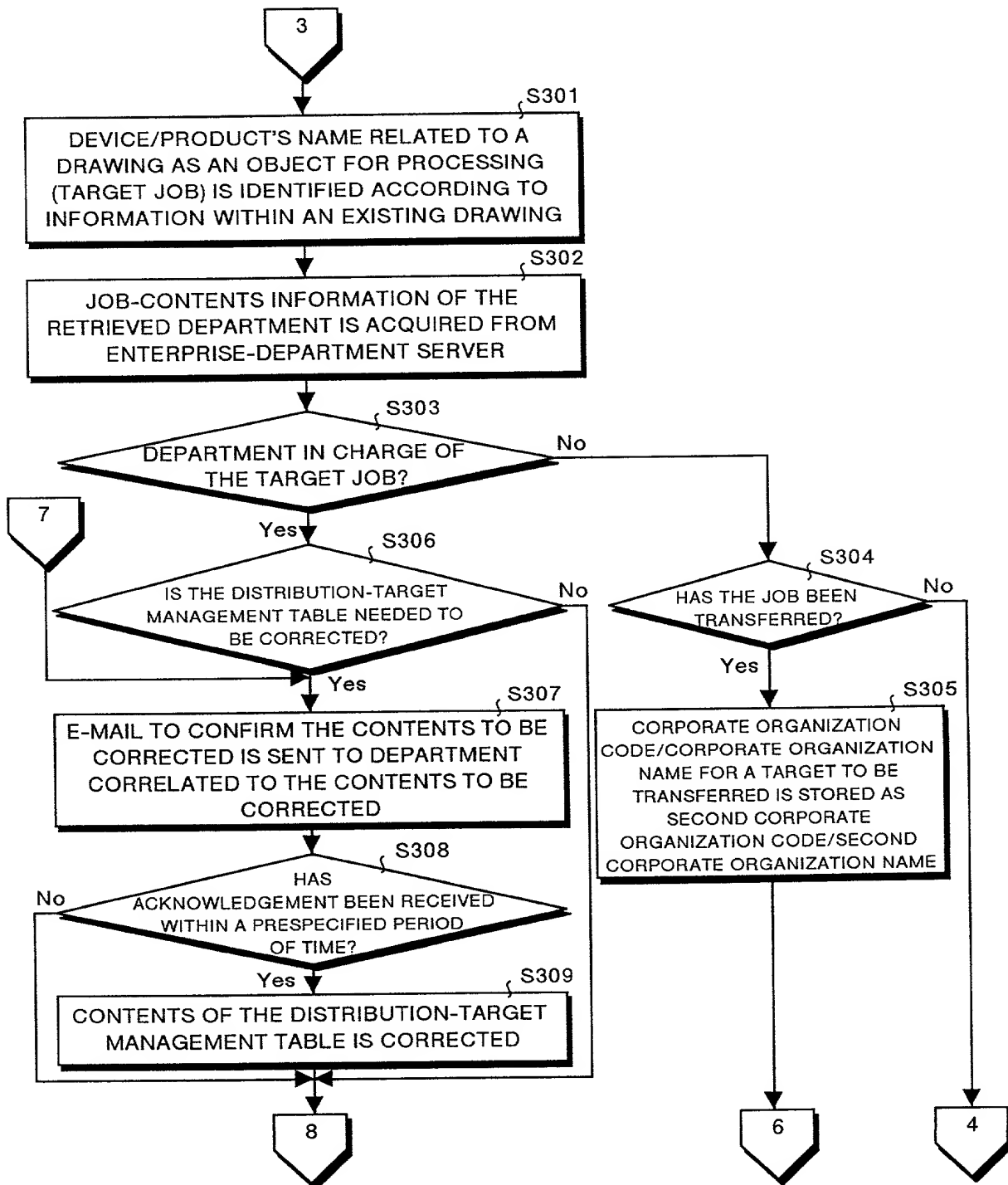


FIG.9

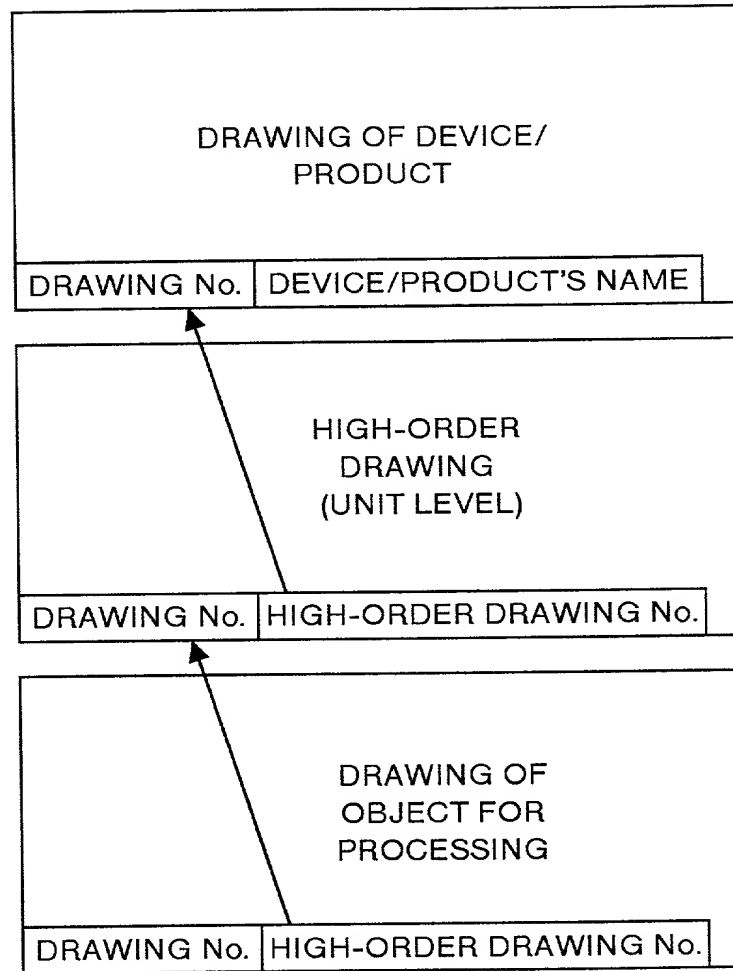


FIG.10

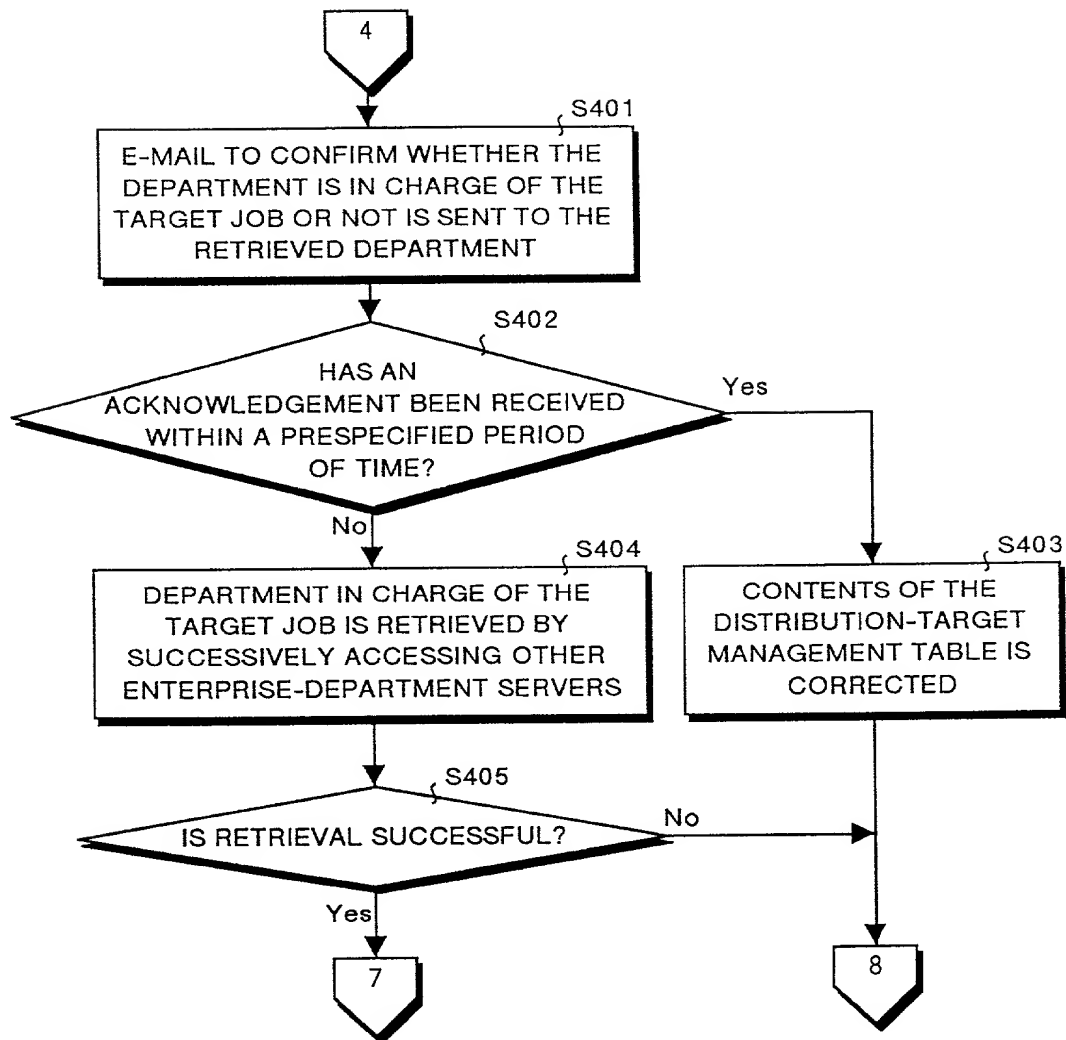


FIG.11

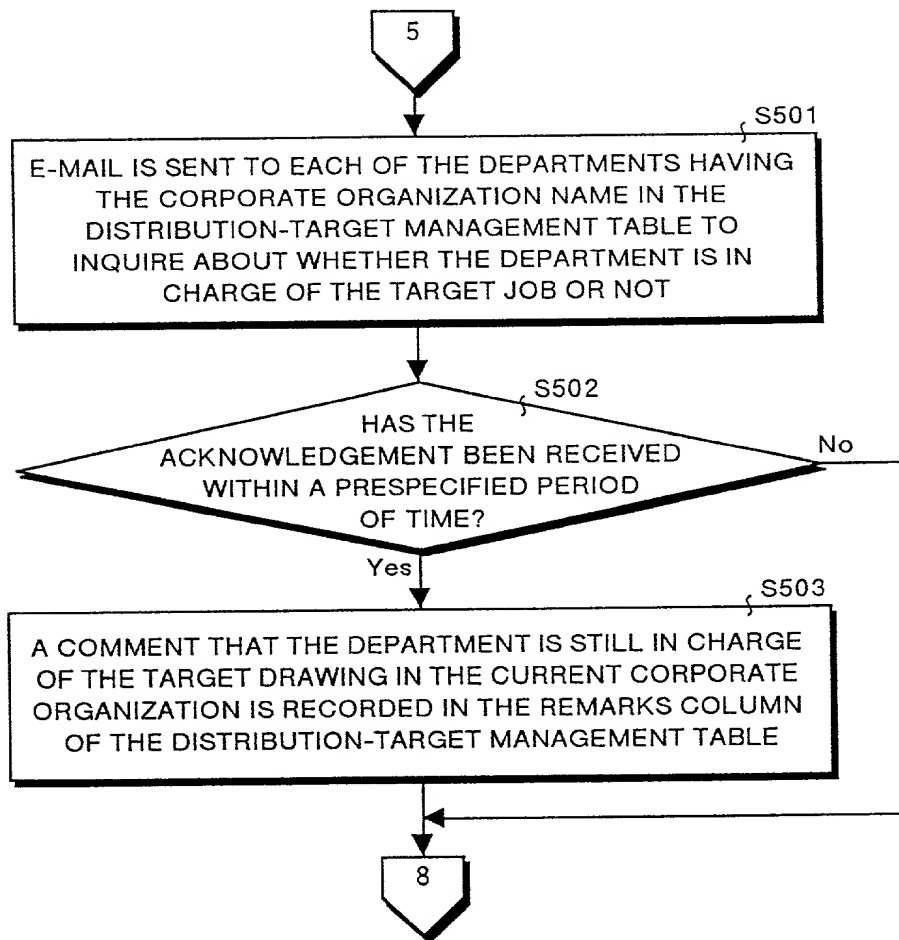




FIG.12

ITEM NUMBER	CORPORATE ORGANIZATION CODE	CORPORATE ORGANIZATION NAME	REGION	PERSON IN CHARGE	COPIES
0001	1432	INFORMATION SYSTEM DEPARTMENT	KAWASAKI	TADASHI OHASHI	1
0002			MINAMITAMA		2
0003			NUMAZU		2

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## Declaration and Power of Attorney For Patent Application

### 特許出願宣言書及び委任状

### Japanese Language Declaration

### 日本語宣言書

下記の氏名の発明者として、私は以下の通り宣言します。

As a below named inventor, I hereby declare that:

私の住所、私書箱、国籍は下記の私の氏名の後に記載された通りです。

My residence, post office address and citizenship are as stated next to my name.

下記の名称の発明に関して請求範囲に記載され、特許出願している発明内容について、私が最初かつ唯一の発明者（下記の氏名が一つの場合）もしくは最初かつ共同発明者であると（下記の名称が複数の場合）信じています。

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

A DOCUMENT MANAGEMENT APPARATUS  
AND A COMPUTER-READABLE MEDIUM

WITH A COMPUTER PROGRAM RECORDED  
THEREON FOR CAUSING A COMPUTER

FUNCTION AS THE DOCUMENT MANAGEMENT  
APPARATUS

上記発明の明細書（下記の欄でx印がついていない場合は、本書に添付）は、

the specification of which is attached hereto unless the following box is checked:

☐ 月 日に提出され、米国出願番号または特許協定条約  
国際出願番号を \_\_\_\_\_ とし、  
(該当する場合) \_\_\_\_\_ に訂正されました。

☐ was filed on \_\_\_\_\_  
as United States Application Number or  
PCT International Application Number  
\_\_\_\_\_ and was amended on  
\_\_\_\_\_ (if applicable).

私は、特許請求範囲を含む上記訂正後の明細書を検討し、内容を理解していることをここに表明します。

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

私は、連邦規則法典第37編第1条56項に定義されるとおり、特許資格の有無について重要な情報を開示する義務があることを認めます。

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

## Japanese Language Declaration (日本語宣言書)

私は、米国法典第35編119条(a)-(d)項又は365条(b)項に基づき下記の、米国外の国の少なくとも一カ国を指定している特許協力条約365(a)項に基づき国際出願、又は外国での特許出願もしくは発明者証の出願についての外国優先権をここに主張するとともに、優先権を主張している、本出願の前に出願された特許または発明者証の外国出願を以下に、枠内をマークすることで、示しています。

### Prior Foreign Application(s)

外国での先行出願  
10-209584

(Number)  
(番号)

Japan

(Country)  
(国名)

(Number)  
(番号)

(Country)  
(国名)

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(Application No.)  
(出願番号)

(Filing Date)  
(出願日)

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(Application No.)  
(出願番号)

(Filing Date)  
(出願日)

(Application No.)  
(出願番号)

(Filing Date)  
(出願日)

私は、私自身の知識に基づいて本宣言書中で私が行なう表明が真実であり、かつ私の入手した情報と私の信じていることに基づき表明が全て真実であると信じていること、さらに故意になされた虚偽の表明及びそれと同等の行為は米国法典第18編第1001条に基づき、罰金または拘禁、もしくはその両方により処罰されること、そしてそのような故意による虚偽の表明を行なえば、出願した、又は既に許可された特許の有効性が失われることを認識し、よってここに上記のごとく宣誓を致します。

I hereby claim foreign priority under Title 35, United States Code, Section 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed.

Priority Not Claimed

優先権主張なし

24/July/1998

(Day/Month/Year Filed)  
(出願年月日)

(Day/Month/Year Filed)  
(出願年月日)

I hereby claim the benefit under Title 35, United States Code, Section 119(e) of any United States provisional application(s) listed below.

(Application No.)  
(出願番号)

(Filing Date)  
(出願日)

I hereby claim the benefit under Title 35, United States Code, Section 120 of any United States application(s), or 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of Title 35, United States Code Section 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of application.

(Status: Patented, Pending, Abandoned)  
(現況: 特許許可済、係属中、放棄済)

(Status: Patented, Pending, Abandoned)  
(現況: 特許許可済、係属中、放棄済)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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**Japanese Language Declaration**  
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委任状: 私は下記の発明者として、本出願に関する一切の手続きを米特許商標局に対して遂行する弁理士または代理人として、下記の者を指名いたします。(弁理士、または代理人の氏名及び登録番号を明記のこと)

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書類送付先

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		Japanese	
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第二共同発明者		Full name of second joint inventor, if any	
第二共同発明者	日付	Second inventor's signature	Date
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国籍		Citizenship	
私書箱		Post Office Address	

(第三以降の共同発明者についても同様に記載し、署名をすること)

(Supply similar information and signature for third and subsequent joint inventors.)